



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,955	03/26/2004	Manabu Ogawa	Q80692	7781

23373 7590 03/08/2006
SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

KLEMANSKI, HELENE G

ART UNIT	PAPER NUMBER
----------	--------------

1755

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/809,955

Applicant(s)

OGAWA ET AL.

Examiner

Helene Klemanski

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/26, 6/25, & 8/10/04.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Information Disclosure Statement

1. The references cited in the Search Report dated May 19, 2004 have been considered.
2. Applicants should note that all the references on the IDS filed August 10, 2004 have been lined through since this IDS is the same as the IDS filed June 25, 2004. All the references on the IDS filed June 25, 2004 have been considered.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3, 4, 6, 8, 9, 12 and 13 of U.S. Patent No. 6,939,399. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the present application are generic to said patent claims and would be obvious thereby.

5. Claims 1-6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 and 8-12 of U.S. Patent No. 6,874,882. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the present application are generic to said patent claims and would be obvious thereby.

6. Claims 1-6 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3-5 and 7-10 of copending Application No. 10/508,792 (US 2005/0174409). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the present application overlap said copending claims and would be obvious thereby.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

In the above references, it is the examiner's position that it would have been obvious to one having ordinary skill in the art that each of the at least two kinds of inks has a corresponding discoloration velocity constant (k) for an image printed with each one of the at least two kinds of inks, and a ratio defined by a minimum value (k_{\min}) selected from among said corresponding constants divided by a maximum value (k_{\max}) selected from among the corresponding constants, is within a range of 0.7 to 1 since the dyes of the above references are the same structure as those claimed and disclosed by applicants.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

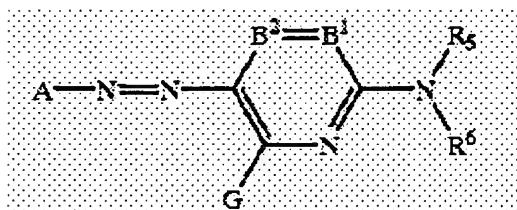
A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

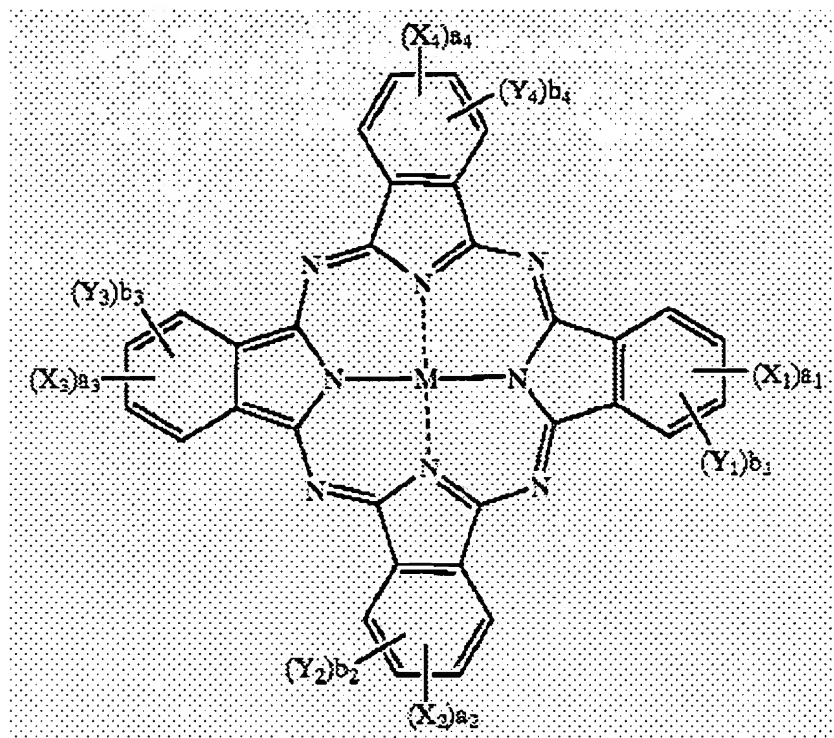
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language..

8. Claims 1-6 are rejected under 35 U.S.C. 102(a) as being anticipated by WO 2003/082994 (US equivalent is US 2005/0174409).

WO 2003/082994 teaches an inkjet ink set comprising a magenta ink, a light magenta ink, a cyan ink, a light cyan ink, a yellow ink and a black ink. The magenta and light magenta inks each comprise an azo dye having an oxidation potential of higher than 0.7 V (vs SCE) of the formula



wherein the substituents are defined in the specification. The cyan and light cyan inks each comprise a phthalocyanine dye having an oxidation potential of higher than 0.7 V (vs SCE) of the formula



wherein the substituents are defined in the specification. The yellow ink contains a yellow dye such as an aryl- or heteryl-azo dye. The aqueous medium comprises a mixture of water and a water-miscible organic solvent such as ethylene glycol. WO 2003/082994 further teaches an ink jet printing method comprising ejecting the above ink set onto a recording medium. See paras. 0024-0050, para. 0050, paras. 0053-0054, paras. 0060-0061, paras. 0066-0071, paras. 0121-0126, the azo dyes on page 9 – page 23, para. 0141, para. 0146, para. 0153, the phthalocyanine dyes on page 31 – page 47, para. 0028, para. 0233, para. 0235, paras. 0262-0263, example 1, Table 1, example 2, Table 3 and claims 1, 3-5, 7 and 8-10 of the US 2005/0174409. The inkjet ink set as taught by WO 2003/082994 appears to anticipate the present claims.

The only limitation in the claims not found by the examiner is that each of the at least two kinds of inks has a corresponding discoloration velocity constant (k) for an

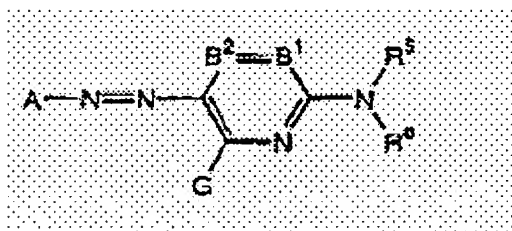
Art Unit: 1755

image printed with each one of the at least two kinds of inks, and a ratio defined by a minimum value (k_{\min}) selected from among said corresponding constants divided by a maximum value (k_{\max}) selected from among the corresponding constants, is within a range of 0.7 to 1. However, this limitation is considered inherent because there does not appear to be any reason why the cited reference would not contain an inkjet ink set with applicants claimed discoloration velocity ratio since the dyes of the above reference are the same structure as those claimed and disclosed by applicants.

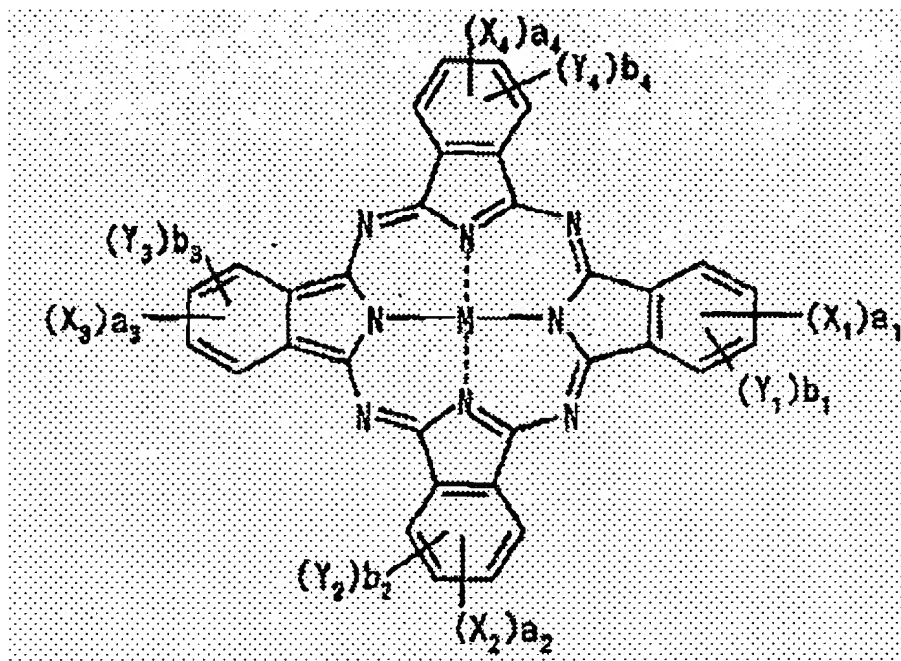
Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

9. Claims 1-6 are rejected under 35 U.S.C. 102(a) as being anticipated by EP1384762.

EP1384762 teaches an inkjet ink set comprising a yellow ink, a magenta ink and a black ink wherein each of the above inks contain a dye, a water-miscible organic solvent such as ethylene glycol and water. The magenta ink comprises an azo dye of the formula



wherein the substituents are defined in the specification. The cyan ink comprises a phthalocyanine dye having an oxidation potential of higher than 1.0 V (vs SCE) of the formula



wherein the substituents are defined in the specification. The inkjet ink set also contains a dark yellow ink that comprises the above azo dye and the above phthalocyanine dye. The inkjet ink set may also contain a light magenta ink and a light cyan ink wherein the light magenta ink contains the above azo dye and the light cyan ink contains the above phthalocyanine dye in smaller concentrations than the magenta and cyan inks. EP1384762 further teaches an ink jet printing method comprising ejecting the above ink set onto a recording medium. See page 2, line 54 – page 4, line 43, page 8, line 39 – page 9, line 20, the azo dyes on pages 10-22, page 23, lines 11-17, page 32, lines 28-30, the phthalocyanine dyes on pages 33-49, page 50, lines 42-48, page 53, lines 26-32, page 60, lines 40-44, example 4-Table 15, example 11-Table 15 and claims 1-5. The inkjet ink set as taught by EP1384762 appears to anticipate the present claims.

The only limitations in the claims not found by the examiner are: (1) that each of the at least two kinds of inks has a corresponding discoloration velocity constant (k) for an image printed with each one of the at least two kinds of inks, and a ratio defined by a minimum value (k_{\min}) selected from among said corresponding constants divided by a maximum value (k_{\max}) selected from among the corresponding constants, is within a range of 0.7 to 1 and (2) that the oxidation potential of the magenta dye is nobler than 1.0 V (vs SCE). However, these limitations are considered inherent because there does not appear to be any reason why the cited reference would not contain an inkjet ink set with applicants claimed discoloration velocity ratio and oxidation potential of the dyes since the dyes of the above reference are the same structure as those claimed and disclosed by applicants.

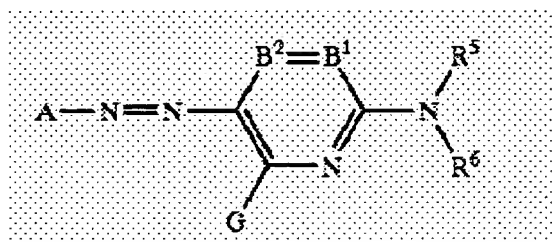
Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

10. Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Taguchi et al. (US 6,874,882).

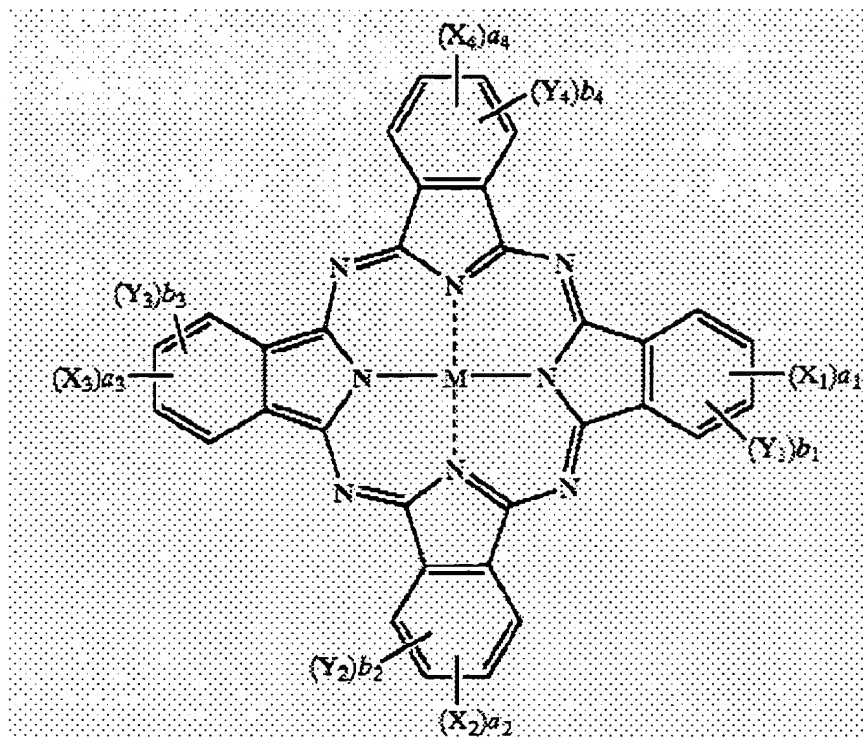
The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Art Unit: 1755

Taguchi et al. teach an inkjet ink set comprising at least three kinds of inkjet inks, each comprising a coloring agent dissolved or dispersed in an aqueous or oily medium wherein the ratio of any two of the forced discoloration rate constants is from 0.5 to 2.0. The inkjet ink set preferably comprises a magenta ink, a light magenta ink, a cyan ink, a light cyan ink, a yellow ink, a light yellow ink and a black ink. The magenta and light magenta inks each comprise an azo dye of the formula



wherein the substituents are defined in the specification. The cyan and light cyan inks each comprise a phthalocyanine dye having an oxidation potential of higher than 1.0 V (vs SCE) of the formula



wherein the substituents are defined in the specification. The yellow and light yellow inks each contain a yellow dye such as an aryl- or heteryl-azo dye. The aqueous medium comprises a mixture of water and a water-miscible organic solvent such as ethylene glycol. Taguchi et al. further teaches an ink jet printing method comprising ejecting the above ink set onto a recording medium. See col. 2, line 26 – col. 4, line 18, col. 5, line 13 – col. 6, line 10, col. 6, lines 20-65, col. 9, line 32 – col. 10, lines 10, col. 15, line 65 – col. 17, line 2, the azo dyes in col. 19 – col. 50, col. 51, lines 1-54, col. 63, line 14, the phthalocyanine dyes in col. 63 – col. 90, col. 91, lines 56-61, col. 92, lines 10-24, example 1, Table 25 and claims 1-5 and 8-13. The inkjet ink set as taught by Taguchi et al. appears to anticipate the present claims.

The only limitation in the claims not found by the examiner is that the oxidation potential of the magenta dye is nobler than 1.0 V (vs SCE). However, this limitation is

Art Unit: 1755

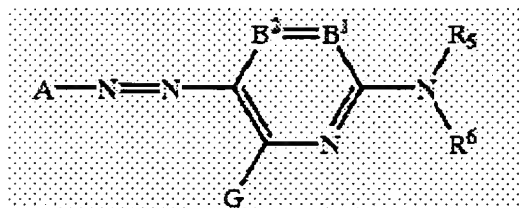
considered inherent because there does not appear to be any reason why the cited reference would not contain an inkjet ink set with applicants claimed oxidation potential of the magenta dye since the magenta dye of the above reference is the same structure as those claimed and disclosed by applicants.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

11. Claims 1-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Yabuki (US 6,939,399).

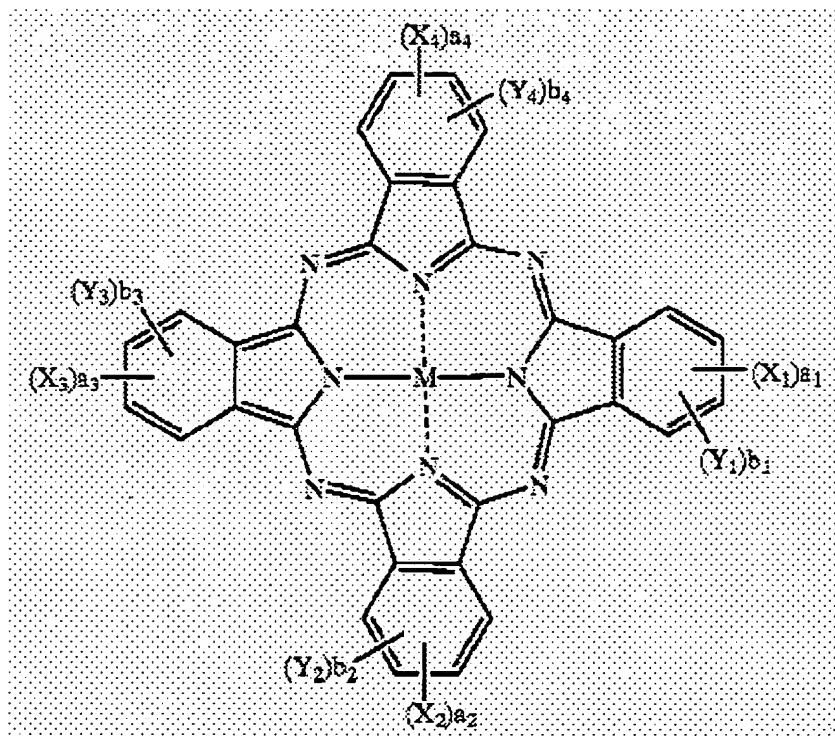
The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Yabuki teaches an inkjet ink set comprising a magenta ink, a light magenta ink, a cyan ink, a light cyan ink, a yellow ink and a black ink. The magenta and light magenta inks each comprise an azo dye having an oxidation potential of higher than 0.8 V (vs SCE) of the formula

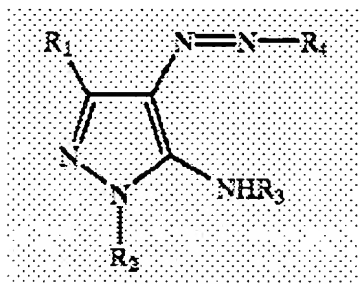


Art Unit: 1755

wherein the substituents are defined in the specification. The cyan and light cyan inks each comprise a phthalocyanine dye having an oxidation potential of higher than 0.8 V (vs SCE) of the formula



wherein the substituents are defined in the specification. The yellow ink contains a yellow dye having an oxidation potential of higher than 0.8 V (vs SCE) of the formula



wherein the substituents are defined in the specification. The aqueous medium comprises a mixture of water and a water-miscible organic solvent such as ethylene glycol. Yabuki further teaches an ink jet printing method comprising ejecting the above

Art Unit: 1755

ink set onto a recording medium. See col. 3, line 30 – col. 6, line 55, col. 7, lines 17-22, col. 8, lines 9-13, col. 9, lines 46-60, col. 17, lines 4-59, col. 18, line 52 – col. 19, line 3, col. 19, lines 26-65, the azo dyes in col. 25 – col. 48, the phthalocyanine dyes in col. 48 – col. 58, col. 60, lines 58-60, col. 61, lines 12-23, col. 63, lines 17-63, col. 66, lines 33-37, example 1, Tables 1, 2a and 2b and claims 1, 3, 4, 6, 8, 9, 12 and 13. The inkjet ink set as taught by Yabuki appears to anticipate the present claims.

The only limitation in the claims not found by the examiner is that each of the at least two kinds of inks has a corresponding discoloration velocity constant (k) for an image printed with each one of the at least two kinds of inks, and a ratio defined by a minimum value (k_{\min}) selected from among said corresponding constants divided by a maximum value (k_{\max}) selected from among the corresponding constants, is within a range of 0.7 to 1. However, this limitation is considered inherent because there does not appear to be any reason why the cited reference would not contain an inkjet ink set with applicants claimed discoloration velocity ratio since the dyes of the above reference are the same structure as those claimed and disclosed by applicants.

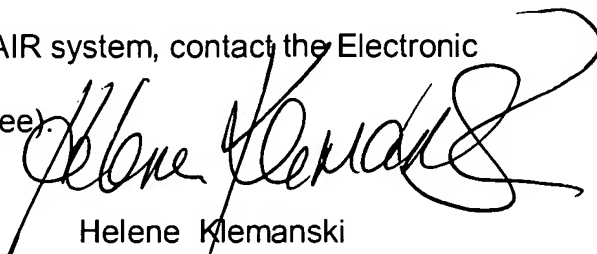
Conclusion

The remaining references listed on forms 892 and 1449 have been reviewed by the examiner and are considered to be cumulative to or less material than the prior art references relied upon in the above rejections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helene Klemanski whose telephone number is (571) 272-1370. The examiner can normally be reached on Monday-Friday 5:30-2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Helene Klemanski
Primary Examiner
Art Unit 1755



HK
March 6, 2006